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DEVELOPMENT AND TRANSFER OF TECHNOLOGIES

Update to progress report

Note by the secretariat

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I. INTRODUCTION

A. Mandate and scope of the note

1. The Conference of the Parties (COP), the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) have requested the secretariat to undertake a number of tasks regarding technology and the transfer of technology. These requests and the approach of the secretariat in responding to them may be found in documents FCCC/SB/1997/1 and FCCC/SB/1997/3.

2. The note incorporates suggestions by a Party regarding the structuring of activities regarding technology and the transfer of technology (see FCCC/SB/1997/1, para. 7). It also provides additional information developed, since the preparation of FCCC/SB/1997/3, on two specific tasks, namely "terms of transfer" and "technology information centres and networks". To advance the work on these tasks and to obtain advice, the secretariat recently held two meetings of experts. The latter were drawn from a roster, with nominations from governments. The reports of these meetings as developed by the experts, are provided in annexes I and II of the present document.

B. Possible action by the SBSTA

3. The SBSTA may wish to take note of this progress report, including the proposal for structuring the work of the secretariat and the topics to be treated in future reports on terms of transfer and technology information centres and networks, and where necessary, provide guidance. This guidance is reflected in the work programme of the secretariat for 1998/1999 presently proposed on pages 6 and 7 of document FCCC/SBI/1997/INF.1.

4. The SBSTA may also wish to consider and, as necessary, provide guidance regarding the need for better data to understand trends in private sector investments and development assistance related to climate change, and for cooperation between the secretariat and the World Bank, the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD), and other institutions.

II. DISCUSSION

5. Since the tasks related to technology and technology transfer that have been requested from the secretariat were identified at a number of sessions and in several decisions, it has been suggested by a Party that these tasks (see FCCC/SB/1997/1/para. 7)[1] should be viewed in a more integrated manner. The secretariat believes that this suggestion merits consideration.

6. The option put forward is to group the eight tasks previously identified into three clusters, which would:

(1) Identify needs for technology and technology information (former task d)

(2) Develop and improve access to information on technologies (former tasks a, e, g, and c)

- Technology inventory database;
- Adaptation technology;
- New information on technologies and know-how in the research and development stage; and
- Technology information centres and networks.

(3) Synthesize and assess information related to technology transfer activities (former tasks b, f, and h)

- Technology transfer activities supported by Annex II Parties;
- Terms of transfer; and
- Private sector technology transfer activities.

7. The listing of the clusters in the above sequence does not imply a particular priority, nor is it necessarily comprehensive. Rather, it suggests that there is a relationship between the tasks and an ordering as to how progress could be made in the long-term. In simple

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[1] The technology and technology information tasks identified in document FCCC/SB/1997/1 are as follows:

(a) Technology inventory database;
(b) Technology transfer activities supported by Annex II Parties;
(c) Technology information centres;
(d) Technology and technology information needs;
(e) Adaptation technology;
(f) Terms of transfer;
(g) New information on technologies and know-how in the research and development stage; and
(h) Private sector technology transfer

terms, the objectives of the three clusters would be to determine what is needed by the Parties to develop and provide access to information that responds to the needs, to assess how technology and information are being transferred, and how it can be done better. These are, however, complex tasks in which Parties, the private sector and multilateral institutions play leading roles. In this context, the secretariat envisages its main role as assisting the flow of information among the Parties and between other entities and the Parties.

8. As noted previously, information on the status of the above tasks may be found in other documents. The SBSTA may however, bearing in mind the available resources for these activities and the activities underway in other organizations,[2] wish to consider the following questions:

(1) Is this a useful approach for grouping the activities of the secretariat?
(2) Are there other tasks that should be considered?

III. REPORTS FOR THE NEXT SESSION

9. For the seventh session of the SBSTA, the secretariat anticipates having information on technology transfer activities supported by Annex II Parties to the Convention, as synthesized from the currently available second national communications, and on a preliminary plan with options related to technology information centres and networks. It will also make available an overview of information on adaptation, including the role of technologies and on the use of the roster of experts.

[2] The secretariat notes, for example, that the Intergovernmental Panel on Climate Change (IPCC) will be assessing technologies as part of its Third Assessment Report (TAR).

Annex I

Summary

UNFCCC expert meeting on terms of transfer and know-how

Bonn, Germany

19-20 June 1997

1. In response to the request of COP 1 to prepare a report which elaborates on the terms under which the transfer of environmentally sound and economically viable technologies and know-how could take place, the United Nations Framework Convention on Climate Change (UNFCCC) secretariat convened a meeting of experts to obtain advice on the content and focus of such a report. Issues related to terms and conditions, for example, from the perspective of developing countries and the private sector, and available data sources were also examined. Each of the experts made brief presentations on technology transfer, including the financial aspects of such transfers. The presentations covered issues such as the needs of developing countries, the role of governments, and the enabling conditions needed by the private sector for successful operations. A list of participants is provided in the appendix.

2. The broad goal of technology transfer as identified by the experts is to increase the access of developing countries to technologies and financing for mitigating emissions of greenhouse gases and adapting to climate change, in the context of their economic and social priorities. It was noted that the needs of developing countries vary significantly and that those needs should be the reference point for technology cooperation which integrates, to varying degrees, government and private sector activities. It was recognized that many elements are important, for example, building technological capacity, strengthening governmental and non-governmental institutions to support environmental policy formulation, instruments and programmes, furthering the transfer and access of information between developed and developing countries and businesses within countries, and developing programmes within developed countries to enable the private sector, particularly small and medium size enterprises to contribute solutions. It was also recognized that many lessons have been learned from past experiences, that technology cooperation has changed over time and that the private sector is playing an increasingly important role.

3. Regarding the focus of the report(s) of the secretariat to the SBSTA, the group urged the secretariat to concentrate on the sectors and aspects most relevant to climate change, namely, energy, transportation, industry, agriculture, forestry, and waste management. It noted the importance of providing basic data to all Parties on financial flows and terms and encouraged the secretariat to complete its first technical paper on this subject, taking into consideration the comments provided by the experts. It encouraged the secretariat to concentrate on the following (in a future paper or papers):

(a) Identifying a conceptual framework for technology transfer issues, possibly including a description of the problem, barriers, opportunities, roles of governments in both developed and developing countries and private sectors and what needs to be done;

(b) Compiling and synthesizing information on the technology transfer activities undertaken by Annex II Parties to the Convention, as based on their second national communications;[1]

(c) Providing information on the role of the private sector, including transnational corporations, small and medium size enterprises, and private sector banks; and

(d) Providing information on activities in developing countries, including institutional and technology success stories.

4. In order to better understand trends in private sector investments and development assistance, it was noted that better data was needed. The experts encouraged the secretariat to cooperate with the World Bank, the OECD and other institutions to improve such data. One way may be to explore better markers for classifying/identifying development assistance projects related to climate change.[2]

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[1] It was suggested that other sources of information on such activities, for example, information developed by the DAC of the OECD, be provided to Parties, if possible.

[2] With a view to collecting data relevant to the United Nations Convention on Biological Diversity (UNCBD), the DAC and the secretariat of that convention are jointly exploring the possibility of developing a biodiversity marker.

Appendix I

List of participants[3]

Experts:

- Mr. Daniel BOUILLE
  Instituto de Economia Energética, Argentina

- Mr. G. Trueba GONZALEZ
  Ministerio de Ciencia Tecnologia y Medio Ambiente, Cuba

- Dr. Yonghun John JUNG
  Korea Energy Economics Institute, Republic of Korea

- Dr. Armin ROCKHOLZ
  Deutscher Industrie und Handelstag, Germany

- Mr. James WOLF
  Clean Energy Technologies, Honeywell Corporation, United States of America

International Organization:

- Mr. Reinhard FELKE
  Organization for Economic Co-operation and Development

Secretariat UNFCCC:

- Mr. Dennis TIRPAK
- Mr. Daniele VIOLETTI

[3] Experts from the following countries and international organizations were invited, but unable to participate: China, Costa Rica, Japan, Kazakhstan, the Netherlands, Sierra Leone, Thailand, the United Kingdom of Great Britain and Northern Ireland, the European Bank for Reconstruction and Development, the International Finance Corporation and the World Bank.

Annex II

Summary

UNFCCC expert meeting on a plan for technology information centres and networks

Bonn, Germany

30 June - 2 July 1997

1. In response to the requests of the second session of the COP and of the SBSTA to consult with Parties and relevant international organizations, taking into account the work of the Climate Technology Initiative (CTI), to prepare a plan with options related to specialized technology information centres and networks[1], the UNFCCC secretariat convened a meeting of nine experts to obtain advice on existing centres and networks, options for improving existing centres and the overall scope of a plan. The meeting was also attended by a consultant to the CTI. The group elected Dr. Jaroslav Marousek, of the Czech Republic, as a Chairperson. The list of participants is provided in appendix II.

2. Each of the experts from developing countries made brief presentations on the status of centres and networks in their countries. The representative of the United Nations Development Programme (UNDP) informed the participants of the status of the Sustainable Development Networking Programme (SDNP), one objective of the programme being to promote access to electronic mail and the internet in developing countries. The representative of the United Nations Environment Programme (UNEP) provided information on the experience of the agency with information centres and activities related to energy, cleaner production, environmentally sound technologies and stratospheric ozone, including a clearing house for information under the Montreal Protocol. The representative of the Greenhouse Gas Technology Information Exchange (GREENTIE) programme of the International Energy Agency (IEA) provided information on a product and corporate database. The representative of the CTI Programme provided the status of a project to survey existing technology information centres in developing countries and in economic transition countries.[2]

3. On the basis of information on existing centres and networks, it was felt that a number of concepts should guide the development of a plan, namely that:

(a) Maximum use should be made of existing centres and networks;

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[1] The mandates may be found in documents FCCC/CP/1996/15/Add.1, FCCC/SBSTA/1996/8 and FCCC/SB/1997/1.

[2] Preliminary definitions of key terms related to centres and networks may be found in appendix I to this summary.

(b) Activities underway within other UN organizations and international organizations should be taken into account;

(c) The needs of Parties to fulfill their obligations under the Convention should be an important objective;

(d) The types of information to be provided should be driven by user needs;

(e) Efforts to improve connectivity should not be given a priority;[1]

(f) Human capacity building should be an important element in any effort to enhance existing centres and networks; and

(g) Centres and networks should aim at being ultimately run on a self-sustaining basis.

4. Two different technology information centres were considered by the group namely, national centres and international centre(s). Currently, many developing countries have institutions that function as national technology information centres. They collect, analyze and disseminate technological information. The capabilities of such institutions differ from country to country. The expanded use of such centres could in the long-run enhance the development of national communications and could accelerate economic development. This could be achieved, for example, by using new technologies to increase productivity and energy efficiency. Currently, there is not a single international centre that serves as a focal point for comprehensive technology information and know-how to support the efforts of existing national information centres.

5. While noting the efforts of the secretariat to identify the specific technology information needs of developing countries and countries in economic transition, the group considered the generic types of information services that could be of interest to different users. The types of information include:

(a) Strategic information on technologies and policies;

(b) Companies;

(c) Products;

(d) Engineers and consultants (national and international);

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[1] These are widely covered by activities of other organizations or development programmes such as, for example, the SDNP under the UNDP that fosters the development of networking facilities in developing countries to encourage sustainable development.

(e) Projects (including case studies);

(f) Financial services;

(g) Policies;

(h) Feasibility studies; and

(i) Scientific.

6. A preliminary matrix of user information needs is shown in Figure 1. The figure suggests that four of these users would be the primary users of information, namely the national governments, local governments, small businesses and consultants/ engineering design companies. In considering this figure, it is important to note that all users could have a potential need for any type of information. Some users, for example, the public and small businesses are likely to rely on national sources of information. Others, such as large businesses are likely to utilize information deriving from international institutions and some might seek information from national as well as international sources. Figure 1 should simply be taken as a preliminary attempt to identify the primary types of information needed by different users.

7. Regarding the development of a plan with options for the SBSTA, the group urged the secretariat to consider the above concepts as well as user information needs. It also noted that a number of different models could be considered for a network to improve the flow of information between suppliers, international technology information centre(s), national technology information centre(s) and users. Consideration of future international centre(s) requires further analysis of the following:

(a) Will one or more international centres be needed?;

(b) If multiple centres are needed, should they be regional or sectorial?; and

(c) What type of information should be provided for the level of services identified in paragraph 5 above?

8. The group also urged the secretariat to consider how national technology information centres could be enhanced to provide better basic services. It noted that additional data might be helpful on how information on technology is transferred in other areas. Information should also be included on the costs of different technology information centre functions. Short and long-term objectives also need to be specified.

Figure 1. User groups and types of technology information needs

	TYPES OF INFORMATION NEEDS								
USER GROUPS	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
National Governments	X				X	X	X		X
Local Governments		X	X	X	X	X		X	
Business: Large	X			X					
Small		X	X	X		X		X	
Educational/ Research Institutions					X		X		X
Consultants/ Engineering Design	X	X	X	X	X	X	X	X	
Financial Institutions	X							X	
Public		X	X		X				

1 Strategic information on technologies and policies
2 Companies
3 Products
4 Engineers and consultants (national and international)
5 Projects (including case studies)
6 Financial services
7 Policies
8 Feasibility studies
9 Scientific

Appendix I

Preliminary definitions[4]

1) International Technology Information Centre(s) - An international entity whose primary function is to collect, catalogue, synthesize and disseminate information on technologies and know-how among national technology information centres and other users. It would help information users find suppliers of information and could selectively help ensure the quality of information. Such an entity could have an international, regional or sectoral focus.

2) National Technology Centre - A governmental, non-governmental or private sector institution whose functions may include, for example, the conduct of research, the development of technologies, consulting services, assessments of technologies, economic and financial analysis, analysis of policies related to technologies, demonstration, training, feasibility studies, the collection and dissemination of information, outreach and networking.

3) National Technology Information Centre - Either an independent entity or a unit within another organization, for example, a national technology centre, whose primary function is to collect, analyze and disseminate information to users within a country on environmentally sound technology and know-how to mitigate or adapt to climate change.

4) Information supplier - Any company, governmental or non-governmental entity that supplies information on technology to potential users.

5) Users of information - These may include any national government institution, local government, large and small businesses, educational and research institutions, consultant engineering design companies, financial institution, non-governmental organization or the public, including consumer groups that use information on technology.

6) Network - A means of passing information, either electronic or human.

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[4] Subject to a review and comparison of terms used by other organizations.

Appendix II

List of participants[5]

Experts:

- Mr. Hervé DROPSY
  South Pacific Regional Environment Programme, Western Samoa

- Ms. Yung-Fong HWANG
  Malaysian Meteorological Service, Malaysia

- Mr. Jaroslav MAROUSEK
  SEVEn, The Energy Efficiency Centre, Czech Republic

- Mr. Norbert NZIRAMASANGA
  Southern Centre for Energy and Environment, Zimbabwe

- Mr. Soobaraj Nayroo SOK APPADU
  Meteorological Services, Mauritius

- Ms. Amelia SUPETRAN
  Environmental Management Bureau, Department of Environment and Natural Resources, Philippines

International Organizations:

- Mr. James CURLIN
  United Nations Environment Programme,
  Industry and Environment Centre, Ozone Action Programme

- Mr. Chuck LANKESTER
  United Nations Development Programme /
  Sustainable Development Networking Programme

- Ms. Melissa VOSS
  International Energy Agency
  Greenhouse Gas Technology Information Exchange (GREENTIE)

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[5] Experts from the following countries were invited, but unable to participate: Belgium, Brazil, Denmark, and the United States of America.

Consultant:

- Mr. Richard SCOTTI
  Hagler Bailly Consulting, Climate Technology Initiative

UNFCCC secretariat:

- Ms. Julia KUNDERMANN
- Mr. Dennis TIRPAK
- Mr. Fareed YASSEEN

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